

Certificate of Conformity

Ex EQUIPMENT

Certificate No.:	ANZEx 08.2007X	Current Issue:	2	Date of Issue:	2022-09-15
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Applicant: **Pepperl+Fuchs SE**
Lilienthalstrasse 200
68307 Mannheim
GERMANY

Equipment: KCD0-SD-Ex1.1245* Transformer Isolated Solenoid Driver


Type of Explosion Protection: Intrinsic Safety "i"

Explosion Protection Marking: [Ex ia Ma] I
-20 °C ≤ Ta ≤ +60 °C

*This certificate is granted subject to the requirements as set out in
Joint Accreditation System of Australia and New Zealand Publications
ANZEx System Rules 2020 & ANZEx Certified Equipment Scheme Rules 2021*

Signed for and on behalf of issuing body

Name & Position


Geoff Barnier
Principal Engineer - Certification

This certificate is not transferable and remains the property of the issuing body.

The status of this certificate can be confirmed through the database located at www.anzex.com.au

Certificate issued by:

Safety in Mines, Testing and Research Station
2 Robert Smith Street, REDBANK QLD 4301

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Manufacturer : **Pepperl+Fuchs SE**
Lilienthalstrasse 200
68307 Mannheim
GERMANY

Additional Manufacturing Location(s): **Pepperl+Fuchs Asia Pte Ltd**
18 Ayer Rajah Crescent
Singapore 139942
SINGAPORE

STANDARDS:

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0:2011 Ed 6.0 Explosive atmospheres Part 0: Equipment—General requirements

IEC 60079-11:2011 Ed 6.0 Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"

This Certificate does not indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

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Schedule

Equipment Description:

The Type KCD0-SD-Ex1.1245* Transformer Isolated Solenoid Driver is designed to transfer current from unspecified equipment located in a non-hazardous area to a hazardous area. The voltage and current is limited to intrinsically safe levels and has linear characteristics. The hazardous area circuit is galvanically separated from the non-hazardous area circuit using transformer.

The equipment comprises a number of electronic components, including an isolating transformer, fuses, zener diodes and current limiting resistors all mounted on a two-layer, single-sided printed circuit board and housed in a plastic enclosure. LED indication is provided for the channel status.

External connections are made via plug and socket with the wire connections to the socket made via screw terminals.

Electrical Ratings/Parameters

Nil

Specific Conditions of Use:

Non-hazardous area terminals 5 & 6: $U_m = 253$ V rms

Hazardous area terminals 1 w.r.t. 2

U_0 (V)	I_0 (mA)	P_0 (mW)	C_0 (μ F)	L_0 (mH)	L/R (μ H/ Ω)
25.2	110	693	4.15	38.56	673.4

Note:

The above parameters apply when one of the two conditions below is given:

- The total L_i of the external circuit (excluding the cable) is < 1% of the L_0 value or
- The total C_i of the external circuit (excluding the cable) is < 1% of the C_0 value.

The above parameters are reduced to 50% when both of the two conditions below are given:

- the total L_i of the external circuit (excluding the cable) > 1% of the L_0 value and
- the total C_i of the external circuit (excluding the cable) > 1% of the C_0 value .

The reduced capacitance of the external circuit (including cable) shall not be greater than 1 μ F.

Conditions of Certification:

None

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Additional Information:

1. The circuit connected to non-hazardous area terminals 5 & 6 is designed to operate from a d.c. supply voltage up to 35 V.

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Register of Issues and Variations

includes the current issue

Issue 0 dated 2008-11-10

Standards relevant for this issue:

IEC 60079-0:2000 Ed 3.1 Explosive atmospheres Part 0: Equipment—General requirements

IEC 60079-11:1999 Ed 4.0 Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs: GB/BAS/ExTR06.0047/00; Baseefa

QAR No. & Issuing CB: DE/PTB/QAR06.0007/01, DE/PTB/QAR06.0008/01; PTB

File Reference: 08/0153

Manufacturer's Documents/Drawings associated with this issue:

Document Number	Pages / Sheets	Document Title	Revision	Date
266-021BS	1	Summary KCD0-SD-Ex1.1245	-	2006-Jan-26
266-020BS-00 (Sheets 1 to 9 of 9)	9	Description KCD0-SD-Ex1.1245	-	2006-Jan-06
266-020BS-01 (Sheets 1 to 3 of 3)	3	Schematic KCD0-SD-Ex1.1245	-	2006-Jan-12
266-020BS-02	1	Description of relevant components KCD0-SD-Ex1.1245	-	2006-Jan 09
266-020BS-03 (Sheet 1 of 2)	1	Component overlay – SMD KCD0-SD-Ex1.1245	-	2006-Jan-17
266-020BS-03 (Sheet 2 of 2)	1	Component Overlay KCD0-SD-Ex1.1245	-	2006-Jan-17
266-020BS-05 (Sheet 1 of 5)	1	Printed Circuit Board KCD0-SD-Ex1.1245	-	2006-Jan-16
266-020BS-05 (Sheet 2 of 5)	1	Printed Circuit Board – Top KCD0-SD-Ex1.1245	-	2006-Jan-16
266-020BS-05 (Sheet 3 of 5)	1	Printed Circuit Board – Bottom KCD0-SD-Ex1.1245	-	2006-Jan-16
266-020BS-05 (Sheet 4 of 5)	1	Printed Circuit Board – Top Lacquering Details KCD0-SD-Ex1.1245	-	2006-Jan-16
266-020BS-05 (Sheet 5 of 5)	1	Printed Circuit Board – Bottom Lacquering Details KCD0-SD-Ex1.1245	-	2006-Jan-16

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Document Number	Pages / Sheets	Document Title	Revision	Date
266-020BS-06 (Sheets 1 to 4 of 4)	4	transformer KCD0-SD-Ex1.1245 / HiC2871	-	2006-Jan-16
266-021SI-10	1	Type Label KCD0-SD-Ex1.1245	-	2008 Oct 08
16-533-04 (Sheets 1 and 2 of 2)	2	housing KCD2	-	2005-Dec-05

Issue 1 dated 2019-01-03

Variations Permitted by this Issue

- Amended referenced QARs

Standards relevant for this issue:

IEC 60079-0:2000 Ed 3.1 Explosive atmospheres Part 0: Equipment—General requirements

IEC 60079-11:1999 Ed 4.0 Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"

Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs: GB/BAS/ExTR06.0047/00; Baseefa

QAR No. & Issuing CB: DE/PTB/QAR06.0008/09; PTB

File Reference: 06/0041

Manufacturer's Documents/Drawings associated with this issue:

None

Issue 2 dated 2022-09-15

Variations Permitted by this Issue

- Use of Phoenix spring terminal plugs as an alternative to the screw terminal plug. Units fitted with the spring terminal plugs will have the addition of ".SP" to the type name i.e. KCD0-SD-Ex1.1245.SP
- Minor changes to the transformer.
- Update editions of the standards
- Modification of Applicant and Manufacturer names to show current legal form

Standards relevant for this issue:

IEC 60079-0:2011 Ed 6.0 Explosive atmospheres Part 0: Equipment—General requirements

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Test & Assessment Reports relevant for this issue:

TR No. & Issuing CBs: GB/BAS/ExTR12.0043/00, GB/BAS/ExTR15.0178/00; Baseefa
 QAR No. & Issuing CB: DE/PTB/QAR06.0008/16; PTB
 File Reference: 060041Audit

Manufacturer's Documents/Drawings associated with this issue:

Document Number	Pages / Sheets	Document Title	Revision	Date
266-021BS-B	1	Summary (IECEX)	-	2015-May-06
266-020BS-06A	4	Transformer KCD0-SD-Ex1.1245 / HiC2871	-	2012-Feb-28
266-021SI-10A	1	Type Label KCD0-SD-Ex1.1245	-	2022-Apr-12